

WHAT IS CLAIMED IS:

1. A long glass fiber filler reinforced resin material for molding comprising:

5 a matrix polymer comprising a polypropylene component having a pentad isotactic index of at least 95%, and having a melt flow rate (JIS K7210, a temperature of 230°C; and a load of 21.18N) of 100 to 300g/10min;

10 a long glass fiber filler in a content of 30 to 50 mass percent with respect to a total mass;

an affinity providing component for providing affinity between the matrix polymer and the long glass fiber filler,

wherein at least the matrix polymer and the long glass fiber filler form a composite.

15 2. The long glass fiber filler reinforced resin material for molding of claim 1, wherein the composite has a form of a 10 to 12mm rod-shaped pellet, and the long glass fiber filler is aligned in a longitudinal direction of the rod-shaped pellet.

20 3. The long glass fiber filler reinforced resin material for molding of claim 1, wherein

a surface of the long glass fiber filler is treated with a coupling agent,

25 the affinity providing component is acid-denatured polypropylene having a functional group that reacts chemically with the coupling agent with which the surface of

the long glass fiber filler is treated.

4. The long glass fiber filler reinforced resin material for molding of claim 3, wherein the acid-denatured polypropylene comprises at least one selected from the group consisting of maleic anhydride-denatured polypropylene and acrylic acid-denatured polypropylene as a constituent.

5. The long glass fiber filler reinforced resin material for molding of claim 1, wherein the matrix polymer is homopolypropylene.

6. The long glass fiber filler reinforced resin material for molding of claim 5, wherein an ethylene-propylene block copolymer comprising a polypropylene component having a pentad isotactic index of at least 95% is mixed therewith.

7. The long glass fiber filler reinforced resin material for molding of claim 6, which is for use in injection molding.

8. An injection-molded article produced by injection-molding the long glass fiber filler reinforced resin material for molding of claim 7,

wherein a weight-average fiber length of the contained glass fiber filler is at least 4mm, a bending modulus thereof is at least 5GPa, and an Izod impact value thereof is at least 25KJ/m².

9. The injection-molded article of claim 8, which is any one of a shroud module, a door module, a liftgate module, a bumper module, a step member, and a structure instrument panel member for vehicles.

10. A long glass fiber filler reinforced resin material for molding comprising:

a masterbatch comprising a matrix polymer comprising a polypropylene component having a pentad isotactic index of at least 95%; a long glass fiber filler in a content of 30 to 50 mass percent with respect to a total mass; and an affinity providing component for providing affinity between the matrix polymer and the long glass fiber filler, wherein at least the matrix polymer and the long glass fiber filler form a composite; and

a diluent polymer comprising a polypropylene component having a pentad isotactic index of at least 95%,

wherein a melt flow rate of the matrix polymer of the masterbatch is larger than twice a melt flow rate of the diluent polymer.

11. The long glass fiber filler reinforced resin material for molding of claim 10, wherein a melt flow rate (JIS K7210, a temperature of 230°C; and a load of 21.18N) of the matrix polymer of the masterbatch is 100 to 300g/10min.

12. The long glass fiber filler reinforced resin material for molding of claim 11, which is for use in injection molding.

5 13. An injection-molded article produced by injection-molding the long glass fiber filler reinforced resin material for molding of claim 12,

wherein a weight-average fiber length of the contained glass fiber filler is at least 4mm, a bending modulus thereof
10 is at least 5GPa, and an Izod impact value thereof is at least 25KJ/m².

14. The injection-molded article of claim 13, which is any one of a shroud module, a door module, a liftgate module, a
15 bumper module, a step member, and a structure instrument panel member for vehicles.

15. An injection-molded article produced by injection-molding a long glass fiber filler reinforced resin material
20 for molding comprising a matrix polymer containing a polypropylene component, and a long glass fiber filler contained in the matrix polymer in a content of 30 to 50 mass percent with respect to a total mass,

wherein a weight-average fiber length of the contained
25 glass fiber filler is at least 4mm, a bending modulus thereof is at least 5GPa, and an Izod impact value thereof is at least 25KJ/m².

16. The injection-molded article of claim 15, which is any one of a shroud module, a door module, a liftgate module, a bumper module, and a step member for vehicles.

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17. A method for molding a long glass fiber filler reinforced resin material comprising:

heating for melting a resin component of the long glass fiber filler reinforced resin material for molding of claim

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kneading the melt under shear flow; and

molding the kneaded melt into a predetermined shape.

18. A method for molding a long glass fiber filler reinforced resin material comprising:

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heating for melting a resin component of the long glass fiber filler reinforced resin material for molding of claim

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kneading the melt under shear flow; and

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molding the kneaded melt into a predetermined shape.

19. A method for molding an injection-molded article using an injection molding machine including resin heating means, a screw and a mold, comprising:

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feeding a long glass fiber filler reinforced resin material for molding into the injection molding machine, the long glass fiber filler reinforced resin material comprising

a composite of homopolypropylene having a pentad isotactic index of at least 95% and a melt flow rate (JIS K7210, a temperature of 230°C; and a load of 21.18N) of 100 to 300g/10min, and a long glass fiber filler, wherein the
5 composite has a form of a 10 to 12mm rod-shaped pellet, and the long glass fiber filler is aligned in a longitudinal direction of the rod-shaped pellet;

heating the resin material fed into the injection molding machine by the resin heating means, thereby melting a
10 resin component thereof while kneading the resin material by rotating the screw at a rotation speed of 20 to 40rpm; and

injecting the heated and kneaded resin material into the mold at an injection filling time of 2.5 to 7.0 seconds, thereby producing an injection-molded article comprising the
15 long glass fiber filler in a content of 30 to 50 mass percent with respect to the total mass, and having a weight-average fiber length of at least 4mm, a bending modulus of at least 5GPa, and an Izod impact value of at least 25KJ/m².

20 20. The method of claim 19, wherein the injection-molded article is a shroud module for vehicles.

21. A method for molding an injection-molded article for a shroud module for vehicles, using an injection molding
25 machine including resin heating means, a screw and a mold, comprising:

feeding a long glass fiber filler reinforced resin

material for molding into the injection molding machine, the long glass fiber filler reinforced resin material comprising a composite of homopolypropylene having a pentad isotactic index of at least 95% and a melt flow rate (JIS K7210, a temperature of 230°C; and a load of 21.18N) of 100 to 300g/10min, and a long glass fiber filler, wherein the composite has a form of a 10 to 12mm rod-shaped pellet, and the long glass fiber filler is aligned in a longitudinal direction of the rod-shaped pellet;

10 heating the resin material fed into the injection molding machine by the resin heating means, thereby melting a resin component thereof while kneading the resin material by rotating the screw; and

injecting the heated and kneaded resin material into the mold, thereby producing a shroud module for vehicles comprising the long glass fiber filler in a content of 30 to 50 mass percent with respect to the total mass, and having a weight-average fiber length of at least 4mm, a bending modulus of at least 5GPa, and an Izod impact value of at least 25KJ/m².

22. The method for molding an injection-molded article of claim 21,

wherein the long glass fiber filler reinforced resin material for molding comprises an ethylene-propylene block copolymer comprising a polypropylene component having a pentad isotactic index of at least 95%.

23. A method for molding an injection-molded article using an injection molding machine including resin heating means, a screw and a mold, comprising:

5 preparing a long glass fiber filler reinforced resin material comprising a matrix polymer comprising a polypropylene component having a pentad isotactic index of at least 95% and having a melt flow rate (JIS K7210, a temperature of 230°C; and a load of 21.18N) of 100 to
10 300g/10min; a long glass fiber filler in a content of 30 to 50 mass percent of with respect with respect to a total mass; an affinity providing component for providing affinity between the matrix polymer and the long glass fiber filler, wherein at least the matrix polymer and the long glass fiber
15 filler form a composite,

 feeding the resin material into the injection molding machine;

 heating the resin material fed into the injection molding machine by the resin heating means, thereby melting a
20 resin component thereof while kneading the resin material by rotating the screw at a rotation speed of 20 to 60rpm; and

 injecting the heated and kneaded resin material into the mold at a back pressure of 2.94×10^5 to 3.92×10^5 Pa, an injection filling time of 2.0 to 7.0 seconds, an injection
25 rate of 70 to 90% and an injection pressure of 1.86 to 3.24MPa;

 keeping the resin material injected into the mold under

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opening the mold to remove an injection-molded article.